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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
HO, CHUONG T

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/608,997	ANAND RANGAJAN
	Examiner	Art Unit
	Chuong Ho	2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

1.   The amendment filed 05/03/04 have been entered and made of record.

2.   Applicant's amendment filed 05/03/04 with the respect to claims 1-29 have

been considered but they are moot in view of the new ground (s) of rejection .

3.   Claims 1-29 are pending.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-4, 9-10, 12, 18, 24-29 are rejected under 35 U.S.C. 102(e) as

being anticipated by Aggarwal (U.S.Patent No. 6,330,614 B1).

In the claim 1, see figure 4, Aggarwal discloses   urging the use of labels

appended to the current IP Header to switch datagrams faster and more

efficiently (see col. 7, lines 65-67); the Routing Engine (the first component)

chooses the interface to the output port 1 (second component) for forwarding all

datagrams destined for network address 'a', and it chooses the interface 2 for the

port 2 for forwarding all datagrams destined for network address 'c', a Forwarding

database will generated as shown in the following table 2. The forwarding table 2

will contain an additional entry representing Label Number assigned to the

Destination Network Address (see col. 8, lines 22-27) (see figure 4); comprising:

See figure 4, a first component (a routing engine) configured to forward data based on lookup in a routing table (forwarding table) (see col. 8, lines 22-27) and to label the data (see col. 12, lines 13-15, it has been mentioned that the MPLS proposal a header is inserted on top of the IP header, with forwarding based on the MPLS label, as in figure 5) with information identifying a second component (Output port 1, 2, 3, 4) (see col. 5, lines 58-65, col. 6, lines 1-3).

A second component (output ports 1, 2, 3, 4) configured to receive the data (see figure 4, col. 5, lines 58-67, col. 6, lines 1-3); an intermediate component (switch) bridging the first component (routing engine) and the second component (output ports 1, 2, 3, 4) to forward the data in a manner that does not require a routing table lookup (see figures 4, 5, MPLS, col. 12, lines 13-15).

6.   In the claim 2, Irwin discloses intermediate components (switch) bridging the first component (routing engine) and the second component (output ports 1, 2, 3, 4) to forward the data in a manner that does not require a routing table lookup (see figures 4, 5, col. 12, lines 13-15).

7.   In the claims 12, 18, see figure 4, Aggarwal discloses urging the use of labels appended to the current IP Header to switch datagrams faster and more efficiently (see col. 7, lines 65-67); the Routing Engine (the first component) chooses the interface to the output port 1 (second component) for forwarding all datagrams destined for network address 'a', and it chooses the interface 2 for the port 2 for forwarding all datagrams destined for network address 'c', a Forwarding database will generated as shown in the following table 2. The forwarding table 2

will contain an additional entry representing Label Number assigned to the

Destination Network Address (see col. 8, lines 22-27) (see figure 4); comprising:

See figure 4, a first component (a routing engine) configured to forward data

based on lookup in a routing table (forwarding table) (see col. 8, lines 22-27) and

to label the data (see col. 12, lines 13-15, it has been mentioned that the MPLS

proposal a header is inserted on top of the IP header, with forwarding based on

the MPLS label, as in figure 5) with information identifying a second component

(Output port 1, 2, 3, 4) (see col. 5, lines 58-65, col. 6, lines 1-3).

A second component (output ports 1, 2, 3, 4) configured to receive the data (see

figure 4, col. 5, lines 58-67, col. 6, lines 1-3); an intermediate component (switch)

bridging the first component (routing engine) and the second component (output

ports 1, 2, 3, 4) to forward the data in a manner that does not require a routing

table lookup (see figures 4, 5, MPLS, col. 12, lines 13-15).

8.   In the claim 3, Aggarwal et al. discloses the first component (routing

engine) is configured to received a packet from a first host and the second

component (output ports 1, 2, 3, 4) is configured to deliver the packet to a second

host (see figures 4, 5, col. 12, lines 13-15).

9.   In the claim 4, Aggarwal et al. discloses the routing table used to set a

path from the first component (routing engine) to the second component is

computed by determining a port (output ports 1, 2, 3, 4) that leads to the second

host (see figure 4, col. 6, lines 50-57).

10.   In the claim 9, Aggarwal et al. discloses the first component, the

intermediate component, and the second component are connected through a

network medium (see figure 4, col. 6, lines 50-57).

11.   In the claim 10, Aggarwal et al. discloses the network medium comprises

Ethernet (see figure 4, col. 6, lines 50-57).

12.   In the claims 25, 27, 29, Aggarwal et al. discloses the first component

comprises a ingress component of the modularized network element (see figure

4); and the second component comprises a egress component of the

modularized network element (see figure 4).

13.   In the claims 26, 28, Aggarwal et al. discloses performing the lookup to

determine the path comprises performing the lookup to determine the path in a

modularized network element that includes the first component, the second

component, and the intermediate component, the position of the components in

the network element changing based on the path (see col. 6, lines 50-67).

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

15.   Claims 5-8, 11, 13-17, 19-23 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Aggarwal et al. (U.S. Patent No. 6,330,614 B1) in view

of Dobbins et al. (U.S.Patent No. 6,249,820 B1) .

In the claims 5, 20, 21, Aggarwal et al. discloses the intermediate component in the path is configured to forward the data to second component without looking up the routing table (MPLS).

However, Aggarwal is silent to disclosing the data comprises a request for an address to which to send the packet; the second component is configured to received the request and to send component is configured to receive the request and to send its address back to the first component.

Dobbins et al. discloses router architecture for forwarding uniscast IP packets across router interfaces (col. 9, lines 61-62) . As illustrated in FIG.7, each router interface 111, 114, 117 has a forwarding engine 112, 115, 118 sitting on it, and each forwarding engine knows how to receive and transmit packets on its own interface (see col. 10, lines 15-17); comprising:

the data comprises a request for an address to which to send the packet; the second component is configured to received the request and to send component is configured to receive the request and to send its address back to the first component (see figure 7, 8a, col. 10, lines 15-17).

Thus, it would have been obvious to one ordinary skill in the art at the time of the invention to modify the system of Aggarwal with the teaching of Dobbins to request for an address to which to send the packet; the second component is configured to received the request and to send component is configured to receive the request and to send its address back to the first componentin order to update the routing table.

16.   In the claims 6, 16, 22, Aggarwal et al. discloses the first component is configured to encapsulate the packet with the address of the second component and to forward the encapsulated packet through the intermediate component to the second component (see figure 4, col. 12, claims 13-15).

17.   In the claim 7, Aggarwal et al. discloses the intermediate component act as a transparent bridge to forward the request and the packet (see figure 4, col. 5, lines 55-67).

18.   In the claims 8, 15, 17, 23, Dobbins et al. discloses the second component is configured to route the packet received through the intermediate component to a second host (see figure 7, col. 10, lines 32-50).

19.   In the claim 11, 10, 14, Dobbins et al. discloses the routing system is configured to support address resolution protocol (see figure 7, col. 10, lines 32-50).

20.   In the claims 13, 19, Aggarwal et al. discloses intermediate components bridging the first component (master node) and the second component to forward the data in a manner that does not require a routing table lookup (see figure 4, col. 5, lines 56-67).

21.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory

action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Conclusion

22.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Chuong Ho whose telephone number is

(703) 306-4529. The examiner can normally be reached on 8:00AM to 4:00PM.

23.   The fax phone number for the organization where this application or

proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application

or proceeding should be directed to the receptionist whose telephone number is

(703) 305-3900.

Chuong Ho
Examiner
Art Unit 2664

08/06/04

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600